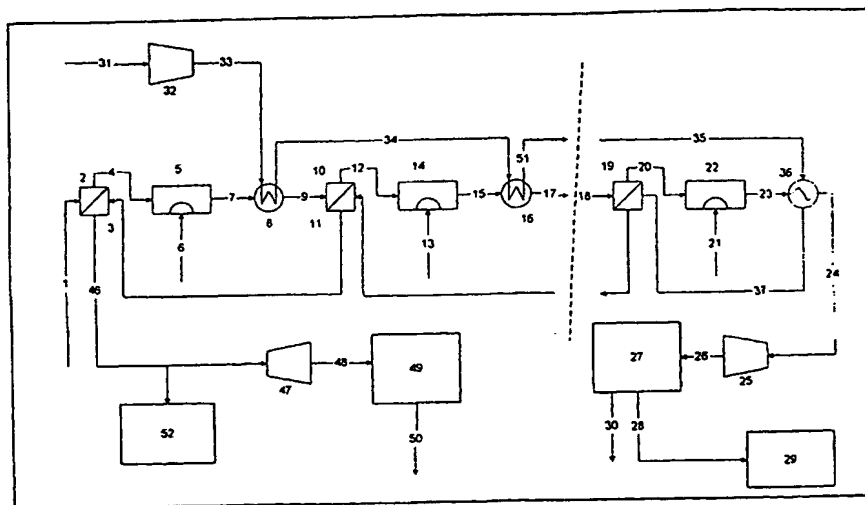


INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : B01D 53/22, C01B 13/02, F23L 7/00		A1	(11) International Publication Number: WO 00/33942
			(43) International Publication Date: 15 June 2000 (15.06.00)
(21) International Application Number: PCT/NO99/00091 (22) International Filing Date: 17 March 1999 (17.03.99) (30) Priority Data: 19985706 4 December 1998 (04.12.98) NO (71) Applicant (for all designated States except US): NORSK HYDRO ASA [NO/NO]; N-0240 Oslo (NO). (72) Inventors; and (75) Inventors/Applicants (for US only): ÅSEN, Knut, Ingvar [NO/NO]; Tiurveien 22, N-3940 Heistad (NO). WILHELM- SEN, Kjersti [NO/NO]; Osebrogata 6, N-3915 Porsgrunn (NO). BRUUN, Tor [NO/NO]; Tellusveien 17, N-3942 Skelsvik (NO). (74) Agent: JOHNSEN, Venche, Høines; Norsk Hydro ASA, N-0240 Oslo (NO).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With international search report.	

(54) Title: METHOD FOR RECOVERING CO₂

(57) Abstract

A method for recovering substantially all carbon dioxide generated in a combustion process where the method comprises the following steps: a) a sweep gas is used to pick up oxygen on the permeate side of a mixed conducting membrane in a first stage which is capable of separating oxygen from a hot air stream fed to the retentate side of the membrane; b) the sweep gas containing oxygen is applied as oxidant in a combustor in the first stage where a carbon containing fuel is combusted; c) hot combustion products of step b) containing CO₂, H₂O and a low concentration of O₂ is used as sweep gas in a membrane in a second stage downstream the combustor in step b); d) the concentration of oxygen in the sweep gas of step c) is increased in the membrane in the second stage (step c) to a sufficiently high level to be used as oxidant in the combustor in the second stage; e) and the steps c) - d) are repeated in one or more stages. Furthermore, the present invention relates to use of the method in different processes.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	MX	Mexico	US	United States of America
CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NL	Netherlands	VN	Viet Nam
CG	Congo	KE	Kenya	NO	Norway	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NZ	New Zealand	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PL	Poland		
CM	Cameroon	KR	Republic of Korea	PT	Portugal		
CN	China	KZ	Kazakstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						